Docket No. 15-XZ-49

# METHOD AND APPARATUS FOR DETERMINING A
# DYNAMIC RANGE OF A DIGITAL MEDICAL IMAGE

ABSTRACT OF THE DISCLOSURE

A method and apparatus are provided for adjusting a
dynamic range of a digital medical image for a medical
imaging system.  The digital medical image contains a
clinical region and a non-clinical region.  The method

5    and apparatus identify the non-clinical region of the
digital medical image and mask the non-clinical region
therefrom to form a clinical image.  The clinical image
is then used to calculate a desired dynamic range for the
medical imaging system.  The dynamic range of the medical

10   imaging system is adjusted accordingly.  According to one
embodiment, the non-clinical region is identified by
dividing the digital medical image into bands of a
predetermined width, generating profiles for each band
and differentiating the profiles to obtain a

15   differentiated profile of each band of a digital medical
image.  The differentiated profile is than analyzed to
identify peaks that exceed predetermined thresholds,
wherein the regions of the differentiated profile
proximate the peaks exceeding the threshold correspond to

20   non-clinical regions.  Once the non-clinical regions are
identified, they are masked or removed.  Next, a desired
image characteristic, such as maximum and minimum gray
scale values, are determined for the clinical region and
a desired dynamic range for the image is obtained based

25   on the image characteristics of the clinical region. In
an alternative embodiment, a histogram is used to
identify the non-clinical regions which are subsequently
masked from the digital medical image.

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